

### REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 41-47 are pending in this application, Claims 46 and 47 having been presently amended. Support for amended Claims 46 and 47 can be found, for example, in the original claims, drawings and specification as originally filed.<sup>1</sup> No new matter has been added.

In the outstanding Office Action, Claims 46 and 47 were rejected under 35 U.S.C. § 103(a) as unpatentable over Tiao et al. (U.S. Patent No. 6,318,863; hereinafter “Tiao”) in view of Hathaway et al. (U.S. Patent No. 5,050,946; hereinafter “Hathaway”); and Claims 41-45 were rejected under 35 U.S.C. § 103(a) as unpatentable over Tiao in view of Hathaway and Li (U.S. Patent No. 6,587,269).

In response to the rejection of Claims 46 and 47 under 35 U.S.C. § 103(a) as unpatentable over Tiao in view of Hathaway, Applicants respectfully submit that amended Claims 46 and 47 recite novel features clearly not taught or rendered obvious by the applied references.

Amended independent Claim 46 is directed to an illumination arrangement including, *inter alia*:

...a solid state light source;

a light collecting, integrating and re-directing device configured to receive at least a part of emitted light from said solid state light source and to redirect said received light; and

a light coupling mechanism configured to improve coupling efficiency of said emitted light from said solid state light source to said light collecting, integrating and redirecting device,

wherein the light coupling mechanism includes a gap structure directly coupling the light collecting, integrating and re-directing device to the solid state light source, and the gap

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<sup>1</sup> See page 4, lines 1-4 of the specification.

width of the gap structure is small in particular compared to the cross-sections of the solid state light source and the light collecting, integrating and re-directing device.

Amended independent Claim 47 recites substantially similar features as independent Claim 46. Thus, the arguments presented below with respect to Claim 46 are also applicable to independent Claim 47.

Page 3 of the outstanding Office Action acknowledges that Tiao fails to “teach the light coupling mechanism includes a refraction index matching means directly coupling the light collecting, integrating and re-directing device to the light source.” In an attempt to cure the above-noted deficiency of Tiao, the outstanding Office Action cites Hathaway. Page 3 of the outstanding Office Action states that Hathaway “teaches for example in Figure 5, light couple mechanism includes refraction index matching means (107) directly coupling the light collecting, integrating and re-directing device to the light source (fig. 5).” Applicants respectfully submit that Hathaway fails to teach or suggest that “the light coupling mechanism includes a gap structure directly coupling the light collecting, integrating and re-directing device to the light source, and the gap width of the gap structure is small in particular compared to the cross-sections of the solid state light source and the light collecting, integrating and re-directing device,” as recited in amended independent Claim 46.

Figure 5 of Hathaway shows a back light system including a dual source light pipe 100 coupled to an LCD, and a lamp 108 that is a light source. Column 4, lines 34-36 of Hathaway describes that an index matching material 107 may optionally be provided between the lamp 108 and the light pipe 100. However, the index matching material 107 is a solid material, and is thus not a gap structure as described in Applicants’ Claim 46.

Column 6, lines 3-10 of Hathaway states:

Several other alternatives are available for the injector, such as index matching material 107 to match the lamp 108 to the light pipe 100 to eliminate surface reflections. The index matching

material 107 is a clear material, such as silicone oil, epoxy or polymeric material, which contacts both the lamp 108 and the end 105. Alternatively, the injector 118 can be shaped to conform to the lamp 108 with a small air gap (FIG. 11).

Thus, the above portion of Hathaway merely describes alternatives for the injector 118, and describes that the injector 118 can be shaped to conform to the lamp 108 with a small air gap. The curved surface of the injector and the small air gap helps locate the lamp 108.<sup>2</sup> Thus, Hathaway fails to teach or suggest that “the light coupling mechanism includes a gap structure directly coupling the light collecting, integrating and re-directing device to the solid state light source, and *the gap width of the gap structure is small in particular compared to the cross-sections of the solid state light source and the light collecting, integrating and re-directing device,*” as recited in independent Claim 46.

Thus, Applicants respectfully submit that amended independent Claim 46 (and all claims depending thereon) patentably distinguishes over Tiao and Hathaway.

Accordingly, Applicants respectfully request that the rejection of Claims 46 and 47 under 35 U.S.C. § 103(a) as unpatentable over Tiao in view of Hathaway be withdrawn.

In response to the rejection of Claims 41-45 under 35 U.S.C. § 103(a) as unpatentable over Tiao in view of Hathaway and Li, Applicants note that Claims 41-45 are dependent on independent Claim 46 and are thus believed to be patentable for at least the reasons discussed above. Further, Applicants respectfully submit that Li fails to cure any of the above-noted deficiencies of Tiao and Hathaway.

Accordingly, Applicants respectfully request that the rejection of Claims 41-45 under 35 U.S.C. § 103(a) as unpatentable over Tiao in view of Hathaway and Li be withdrawn.

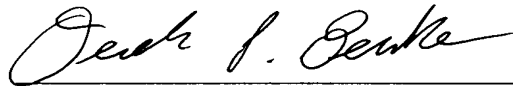
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<sup>2</sup> See column 6, lines 8-12 of Hathaway.

Consequently, in view of the present amendment, and in light of the above discussion, the pending claims as presented herewith are believed to be in condition for formal allowance, and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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